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Please find below and/or attached an Office communication concerning this application or proceeding.



Application No. Applicant(s) 09/670,214 BROWNING ET AL. Office Action Summary Examiner **Art Unit** Cheyne D Ly 1631 -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). **Status** 1) Responsive to communication(s) filed on <u>28 April 2004</u>. 2a) This action is **FINAL**. 2b) This action is non-final. 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) Claim(s) 1-68 and 75-101 is/are pending in the application. 4a) Of the above claim(s) 75-86 is/are withdrawn from consideration. 5) Claim(s) is/are allowed. 6) Claim(s) 1-68 and 87-101 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) 1-68 and 75-101 are subject to restriction and/or election requirement. **Application Papers** 9) The specification is objected to by the Examiner. 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. Priority under 35 U.S.C. § 119 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) ☐ All b) ☐ Some * c) ☐ None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. Attachment(s) 1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s)/Mail Date. __ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _ 6) _ Other: U.S. Patent and Trademark Office

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DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 28, 2004 has been entered.

- 2. The cancellation of claims 69-74 and addition of new claims 75-101 have been acknowledged.
- 3. Newly submitted claims 75-86 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:
- 4. Claims 75-86 require a step for "conducting the customized selected study type" which is not required in the elected invention as recited by claims 1-68. It is noted that the elected invention requires a step for "conducting the selected study type" which is different from the limitation of "conducting the customized selected study type." It is further noted that claim 10 of the elected invention recites "the step of customizing the study type prior to the conducting step"; however, the elected claims do not recite any steps for conducting the "customized selected study type." The distinct limitations of new claims 75-86 from the elected invention necessitate a search burden is all the claims are examined together.
- 5. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 75-86 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

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6. Claims 1-68 and 87-101, TEDPHA, are examined on the merits.

CLAIM REJECTIONS - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

- 8. Claims 1-68 and 87-101 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory algorithm type subject matter.
- 9. Claims 1-68 and 87-101 are rejected because said claims are directed to a method, data processing system, and computer program product comprising steps for analyzing data directed to PHA without any physical alteration step, which is considered to be non-statutory subject matter. "For example, a computer process that simply calculates a mathematical algorithm that models noise is nonstatutory. However, a claimed process for digitally filtering noise employing the mathematical algorithm is statutory." (MPEP § 2106 (IV)(B)(2) (b), part ii). Similar to the nonstatutory example above, the instant invention comprises algorithmic steps for analyzing data directed to PHA without any physical alteration resulted from said analysis.
- 10. It is acknowledged that the instant invention comprises a data processing system, and computer program product with the means for analyzing data directed to PHA in said system. However, the means for analyzing data directed to PHA in a processing system do not cause a physical transformation as a result of the analysis outside of said system. "Such activity is not determinative of whether the process is statutory because such transformation alone does not distinguish a statutory computer process from a nonstatutory computer process" (MPEP § 2106 (IV)(B)(2) (b), part ii).

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CLAIM REJECTIONS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 12. Claims 1-46 and 88-96 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- Specific to claim 1, line 11; claim 25, line 10; claim 87, line 11, claim 92, line 9, the 13. limitation of "on the data processing system" causes said claims to be vague and indefinite because said limitation is inconsistent with the recitation of "in the data processing system" in the rest of the claims. The claims are unclear as to whether the limitation of "on the data processing system" is different from the limitation of "in the data processing system." Clarification of the metes and bounds is required. Claim 2-24, 26-46, 88-91, and 93-96 are rejected for being dependent from claim 1, 25, 87, or 92.

CLAIM REJECTIONS UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

14. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-68 and 87-101 are rejected under 35 U.S.C. 112, first paragraph, as containing 15. subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection.

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16. Specific to claim 1, lines 3-6; claim 25, lines 3-4; claim 47, lines 5-8; claim 87, lines 3-6, claim 92, lines 3-4; and claim 97, lines 5-8, the limitations of "storing information describing a plurality of chemical processes" and "storing information describing a plurality of study types" have not been found in the instant specification. It is noted that the instant specification provides a general process program instructions being stored in a computer-readable memory (page 10, lines 22-34) and "Documenting" as directed to data being stored in a computer-readable media (page 12, lines 28-34). However, the general disclosure cited above does not provide adequate written description basis for the limitations of "storing information describing a plurality of chemical processes" and "storing information describing a plurality of study types."

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- It is noted that the previously amended claims 69-74, filed November 06, 2003, which are 17. currently cancelled, recite the limitations of "storing a plurality of study types" and "storing a plurality of chemical processes." The instant specification does not provide adequate written description basis for said limitations in the previously amended claims.
- 18. Specific to claim 1, lines 7-9; claim 25, lines 5-8; claim 47, lines 9-13; claim 87, lines 7-9, claim 92, lines 5-7; and claim 97, lines 9-12, the limitations of "selecting one of the plurality of chemical processes" has not been found in the instant specification. Further, the limitation of "study types to be perform on the one of the plurality of chemical processes" has not been found in the instant specification. It is noted that the instant specification discloses "the selection of a chemical process to be evaluated" and "appropriate study type(s)... are chosen for this evaluation." However, the disclosure of "the selection of a chemical process to be evaluated" and "appropriate study type(s)...are chosen for this evaluation" do not provide written

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description basis support for the limitations of "selecting one of the plurality of chemical processes" and "study types to be perform on the one of the plurality of chemical processes."

CLAIM REJECTIONS - 35 USC § 103

- 19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 20. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
- 21. Claims 1-7, 10, 11, 15-32, 35, 36, 38-54, 57, 58, 60-68, and 87-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herrington (1996) in combination with Heinlein et al. (US 5,950217 A).
- 22. Heinlein et al. discloses a computer system and method for process safety with the object to prevent employee exposures to chemical hazards according OSHA developed process safety management standards (column 1, lines 61-66).

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23. The method of Heinlein et al. comprises storing information describing a plurality of chemical processes or study types such as operating procedures, process flows and hazard chemical used in the process into a data processing system wherein the data is stored and documented for performing PHA (column 3, lines 21-56), as in instant claim 1, lines 1-6; claim 87, lines 1-6; claim 92, lines 1-4; claim 97, lines 1-8.

- 24. Heinlein et al. discloses a programmed means for retrieving (selecting) pre-loaded organizational unit descriptions that others have used to achieve compliance with the PSM standard (column 11, line 50, to column 12, line 3), as in instant claim 1, lines 7-9; claim 87, lines 7-9; claim 92, lines 5-7; and claim 97, lines 9-12.
- 25. Heinlein et al. discloses using a computer network to implement a project safety management (PSM) standard and a report comprising the consensus (resolution) of the PSM is generated (column 12, claims 3-4), as in instant claim 1, lines 10-13; claim 3; claim 87, lines 10-12; claim 92, lines 8-10, and claim 97, lines 13-15.
- 26. The method Heinlein et al. comprises set priorities and conducts analysis according to required schedules; performing a process hazard assessment (PHA); update and reevaluate (revalidation) PHAs at least every five years (column 2, lines 18-38), as in instant claims 28, 30, and 50-53.
- 27. Further, a system is established to promptly address findings and recommendations, assure recommendations are documented and resolved, develop a written schedule for completing actions, communicate actions to operating, maintenance and other employees, and to perform and document the actions taken (column 2, lines 18-38), as in instant claims 5, 6, 29, and 31.

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- 28. An apparatus is provided for inputs and retrieving the above documents from a database (Abstract etc.), as in instant claims 23, 24, 41-46, 62-68, 90, 91, 95, 96, 100, and 101.
- 29. Heinlein et al. discloses a system and computer program for performing the methods discussed above (column 4, lines 14-67 to column 5, lines 1-11 and claims 1-5), as in instant claims 25 and 47.
- 30. However, Heinlein et al. does not disclose the limitation of TEDPHA, or selecting one of a plurality of chemical processes and study types.
- Analysis (TEDPHA) for studying the Mechanical Integrity program in compliance with OSHA's PSM regulation (1910.119) (Herrington, page 110, column 1, lines 22-25) to ensure that process equipment containing and controlling highly hazardous chemicals is maintained to high standards which minimizes the chances of accidental release and subsequent injuries or accidents (Herrington, Abstract etc.; page 110, column 1, lines 7-11; column 2, lines 8-14), as in instant claims 2, 26, and 48.
- 32. Herrington discloses the company has been actively engaged in compliance efforts with OSHA regulations as cited in the OSHA document 57:6356 directed to 29 CFR 1910.119 (Herrington, page 110, column 1, line 24, and page 113, Citation No. 1). The inclusion of OSHA document 57:6356 is not being used as prior art but only to expand the OSHA regulations directed to 29 CFR 1910.119. OSHA document 57:6356 discloses a plurality of chemical processes, under the category of process safety management of highly hazardous chemicals, to be evaluated (OSHA document 57:6356, page 2, Process Safety Management of Highly Hazardous Chemicals §). OSHA document 57:6356 discloses the selection of one of a plurality

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of study types appropriate to evaluate the hazards of the process being analyzed (OSHA document 57:6356, page 3, § (2)), as in instant claims 1, 87, 92, and 97.

- 33. OSHA document 57:6356 discloses many businesses develop custom checklist or what-if questions as part of their PHA to determine which PHAs to conduct first (OSHA document 57:6356, page 20, lines 23-28), as in instant claims 10, 11, 35, 36, 57, and 58.
- 34. The employer completes a compilation of written process safety information before conducting any process hazard analysis (OSHA document 57:6356, page 4, lines 21-22), a report directed to an incident is generated; establish a system to promptly address and resolve the incident, resolutions; and corrective actions are documented (OSHA document 57:6356, page 11, (m) (4) and (5)), as in instant claims 15, 16, 38, 39, 60, and 61.
- 35. An emergency resolution plan is generated wherein a number of interim actions and the final action are listed (OSHA document 57:6356, page 26, lines 15-28), as in claims 17, 40, and 62.
- 36. The resolution is documented; document what actions are to be taken; complete actions as soon as possible; develop a written schedule of when these actions are to be completed (OSHA document 57:6356, page 7, (5)), as in instant claim 18.
- A tracking system might include periodic status reports shared with affected levels of management, specific reports such as completion of an engineering study, and a final implementation report. This type of tracking system provides the employer with the status of the corrective action (OSHA document 57:6356, page 28, ¶ 6 to page 29, ¶ 1), as in instant claims 19-22; claim 87, lines 17-19; claim 92, lines 15-16; claim 97, lines 20-21; and claims 88, 89, 93, 94, 98, and 99.

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38.

Art Offit. 1051

The inclusion of OSHA document by Clark (September 29, 1993) is not used a as prior

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art but only to disclose that PSM of Highly Hazardous Chemical standards, 29 CFR 1910.119 as

defined by OSHA as directed to "worst-first" basis PHA, processes are divided into nodes

according to their scheduled dates, and the most hazardous process is completed first (Clark,

page 1, lines 2-17), as in instant claims 4, 7, 27, 32, 49, and 54.

39. Heinlein et al. discloses an improvement for reducing the risk of errors and time it would

take for conducting a PHA (column 2, lines 60-67) under the OSHA PSM standard. The

improvement of Heinlein et al. is directly applicable to the method of Herrington for using

TEDPHA for studying the Mechanical Integrity program in compliance with OSHA's PSM

regulation (1910.119) (Herrington, page 110, column 1, lines 22-25).

40. An artisan of ordinary skill in the art at the time of the instant invention would have been

motivated by the improvement disclosed by Heinlein et al. to reduce the risk of errors and time it

would take for conducting a PHA by using the TEDPHA for being in compliance with OSHA's

PSM regulation (1910.119) as disclosed by Herrington. Therefore, it would have been obvious

to one having ordinary skill in the art at the time of the invention was made to conduct a

TEDPHA for being in compliance with OSHA's PSM regulation (1910.119) as taught by

Heinlein et al. and Herrington.

RESPONSE TO ARGUMENTS

41. Applicant's arguments directed to the deficiency of Herrington have been fully

considered. The incorporation of Herrington with Heinlein et al. has been necessitated by claims

amendments, which also addresses the deficiencies of Herrington as argued by Applicant.

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Further, the combination of Herrington with Heinlein et al. fully discloses the claimed invention as directed to claims 1-7, 10, 11, 15-32, 35, 36, 38-54, 57, 58, 60-68, and 87-101.

- Specific to Applicant's argument directed to claim 10, OSHA document 57:6356 42. discloses many businesses develop custom checklist or what-if questions as part of their PHA to determine which PHAs to conduct first (OSHA document 57:6356, page 20, lines 23-28).
- 43. Specific to claim 17, Applicant argues that "there is no description or suggestion in the OSHA regulations...should be stored in the data processing system as part of a stored resolution plan." Heinlein et al. discloses the entry of ideas directed to scope of work, resource management, prioritization of processes with highly hazardous chemical, and a work plan in to a network computer. The system is used to perform PHA and create all the documents required for PSM (column 3, lines 40-56). Further, Heinlein et al. cites the OSHA document 57:6356 which discloses an emergency resolution plan is generated wherein a number of interim actions and the final action are listed (OSHA document 57:6356, page 26, lines 15-28). Therefore, the combination of Heinlein et al. and Herrington discloses the limitation of claim 17 as argued by Applicant.
- Claims 1-68 and 87-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over 44. Herrington (1996) in combination with Heinlein et al. (US 5,950217 A) taken with Occupational Safety and Health Administration (61:56746-56856, November 04, 1996).
- 45. This rejection is necessitated by Applicants amendments.
- 46. Heinlein et al. and Herrington disclose the limitations to claims 1-7, 10, 11, 15-32, 35, 36, 38-54, 57, 58, 60-68, and 87-101 as discussed above.

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47. However, Heinlein et al. and Herrington do not disclose the limitations to claims 8, 9, 12-14, 33, 34, 37, 55, 56 and 59

- 48. Occupational Safety and Health Administration (61:56746-56856, November 04, 1996) discloses a method of studying of employee exposure to a hazardous chemical such as 1,3-Butadiene by determining the risk of exposure (page 27, lines 21-22) and ranking the job in accordance with exposure, and develop a job-exposure matrix (page 28, lines 13-17) as in claims 8, 9, 12, 33, 34, 37, 55, 56 and 59.
- 49. Table V-16 (page 87) discloses a matrix citing consequent severity in terms of disease and likelihood of occurrences, as in instant claims 13 and 14.
- 50. Heinlein et al. discloses an improvement for reducing the risk of errors and time it would take for conducting a PHA (column 2, lines 60-67) under the OSHA PSM standard. The improvement of Heinlein et al. is directly applicable to the method of Herrington for using TEDPHA for studying the Mechanical Integrity program in compliance with OSHA's PSM regulation (1910.119) (Herrington, page 110, column 1, lines 22-25.
- 51. Occupational Safety and Health Administration (61:56746-56856) discloses the implementation of OSHA's PSM regulation (1910.119) as directed toward such chemical hazard as 1,3-Butadiene. One of ordinary skill in the art would have been motivated by the improvement disclosed by Heinlein et al. to improve the computer system for implementing OSHA's PSM regulation (1910.119) as taught by Herrington and Heinlein et al., and direct said improvement to the hazard chemical of 1,3-Butadiene as taught by Occupational Safety and Health Administration (61:56746-56856).

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52. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the method and computer system for being in compliance with OSHA's PSM regulation (1910.119), as taught by Herrington and Heinlein et al., as directed to 1,3-Butadine as taught by Occupational Safety and Health Administration (61:56746-56856).

RESPONSE TO ARGUMENTS

- Applicant has incorporated "all the analysis of these claims from Pages 22-29 of their Amendment of November 3, 2003" which has been noted. However, the Examiner is unaware of the citation of "Pages 22-29 of their Amendment of November 3, 2003." Further, the phrase "their Amendment" does not make it clear what Applicant has incorporated. In the event that Applicant is referring to Applicant's response, filed November 06, 2003. It is noted Applicant's arguments in said response have been fully considered and addressed in the Office Action, mailed January 29, 2004.
- 54. Specific to Applicant's argument direct to claims 23 and 34, the limitation of "generation of a resolution database" has been addressed by the disclosure of Heinlein et al. for an apparatus is provided for inputs and retrieving the above documents from a database (Abstract etc.).
- 55. Applicant argues that claims 35, 36, 57, and 58 are patentable for the same reasons that were described for claims 10 and 11. Applicant's argument has been fully considered and found to be unpersuasive because OSHA document 57:6356 discloses many businesses develop custom checklist or what-if questions as part of their PHA to determine which PHAs to conduct first (OSHA document 57:6356, page 20, lines 23-28).
- 56. Specific to Applicant's argument that Herrington does not discloses "the risk matrix that recited in Claim 9, Occupational Safety and Health Administration (61:56746-56856, November

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04, 1996) discloses a method of studying of employee exposure to a hazardous chemical such as 1,3-Butadiene by determining the risk of exposure (page 27, lines 21-22) and ranking the job in accordance with exposure, and develop a job-exposure matrix (page 28, lines 13-17).

CONCLUSION

- 57. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
- 58. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.
- 59. This application contains claims 75-86 drawn to an invention nonelected with traverse, May 28, 2003. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.
- 60. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.
- 61. Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the

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USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

- 62. For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.
- 63. Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Dune Ly, whose telephone number is (571) 272-0716. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.
- 64. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (571) 272-0722.

C. Dune Ly 6/23/04

Julin J. Marshel 14/04 ARDIN H. MARSCHEL PRIMARY EXPOSITION